

FUTURE OF NUCLEAR

Meet the Panelists



Yasir Arafat – *Microreactors and Applications*

Yasir Arafat is the chief designer and project lead for the Microreactor Applications Research Validation and Evaluation, or MARVEL, project at Idaho National Laboratory and the national technical area lead for the Department of Energy Microreactor Program. Arafat specializes in nuclear systems design comprising agile product development, model-based systems engineering, process engineering, qualification testing reactor safety basis, and licensing for existing nuclear power plants, the Westinghouse AP1000 pressurized water reactor and the Westinghouse small modular reactor. He has been issued 12 patents for his inventions in advanced reactors. Arafat earned a bachelor's degree in chemical engineering and is completing master's degrees in nuclear engineering and management, as well as his doctorate in nuclear engineering.



Lori Braase – *Partnerships with Private Industry*

Lori Braase is a business development executive supporting INL's nuclear mission organizations. She connects INL's technology experts with the nuclear industry to support their commercialization efforts. These public-private partnerships leverage INL's expertise and capabilities to meet the nation's energy needs. Braase has 32 years of experience at INL providing various nuclear programs with systems engineering, project management, technical integration and strategic planning expertise. Braase has a bachelor's in business management and a master's certificate in applied nuclear energy.



Jess Gehin – *Carbon-free Power Project*

Jess Gehin is the associate laboratory director for the Nuclear Science and Technology directorate at Idaho National Laboratory. Gehin originally joined INL in 2018 as the chief scientist for the NS&T directorate, bringing nearly 30 years of experience in reactor core physics and technologies to the lab. His research interests include nuclear reactor physics and reactor and fuel cycle technologies, and he has broad experience in the development and use of reactors for a range of applications including electricity production, heat production, materials production and research with specific expertise in modeling and simulation to support reactor design, operation and safety analysis. Gehin is a Fellow of the American Nuclear Society. Gehin earned a bachelor's degree in nuclear engineering from Kansas State University and master's and doctorate degrees in nuclear engineering from the Massachusetts Institute of Technology.



Marianne Walck – *Beyond Electricity/Integrated Energy Systems*

Marianne Walck provides strategic leadership, direction and integration for research, science and technology at INL in her roles as deputy lab director for Science and Technology and chief research officer. She leads INL's Laboratory Directed Research and Development program, directs INL's interactions with the Department of Energy's Office of Science, and oversees INL's strategic interactions with universities. Walck joined INL in 2019. She has more than 30 years of DOE national laboratory technical leadership experience, including technical program leadership, research leadership, and line, personnel and site management. Her prior experience includes 33 years at Sandia National Laboratories, concluding as vice president for SNL's California laboratory and its Energy and Climate Program. Walck serves on several advisory boards for universities, national laboratories and technical institutes, including the Texas A&M Energy Institute and the U.S. Women in Nuclear Executive Advisory Council. Walck was named one of the Top 100 Women in Energy by the National Diversity Council in 2021. She is also vice chair of the Idaho Higher Education Research Council and is a past chair of the National Laboratory Chief Research Officers. She earned doctorate and master's degrees in geophysics from California Institute of Technology and a bachelor's degree in geology/physics from Hope College. She holds memberships in the American Geophysical Union, the Seismological Society of America, the Association for Women Geoscientists, the American Nuclear Society, Women in Nuclear, and the American Association for the Advancement of Science.



Stephanie Weir – *Engaging with Communities*

Stephanie Weir is the National Reactor Innovation Center's (NRIC) Siting and Regulatory Strategy manager. She is responsible for developing and managing strategy and projects relating to advanced reactor siting, including collaborating with and seeking input from industry, the Department of Energy, the Nuclear Regulatory Commission, national laboratories, universities, tribes, and other stakeholders. She is also responsible for developing, managing and executing NRIC's national strategy relating to regulatory and siting risk reduction, in coordination with NRIC Director Ashley Finan. Weir holds a Juris Doctor degree as well as bachelor's degrees in geology and physical science.